

Exciting Advances in Prosthetics

# Message From the Network Director

Michael F. Mayo-Smith, M.D., M.F. Network Director

Dear Veterans,

s we begin a new year in the New England VA Healthcare System, I am looking forward to new opportunities for providing our Veterans with innovative health care. Foremost, I am

excited about the possibilities that new technologies bring, specifically in the areas of prosthetics and rehabilitation. Please read the article that begins on page 4 of this issue of *Veterans' Healthy Living* about the future of prosthetics and the exciting innovations coming out of the Center for Restorative and Regenerative Medicine, a collaboration between the Providence VA Medical Center, Brown University and Massachusetts Institute of Technology. For Veterans who have suffered limb trauma, the Center is developing state-of-the-art

solutions for the restoration of limb function.

VA is also using today's technologies to reach out to the new generation of Veterans. Popular Web venues that are part of everyday life for these young Veterans—Facebook, MySpace, You Tube, and others—now feature a VA presence.

In this issue, we also provide you with some timely information on coping with allergies and a new national safe-driving initiative aimed at reducing the number of vehicle crashes among Veterans who have recently returned home from service overseas.

This year promises to be filled with exciting developments. One of these developments is geared toward families who need a place to stay while loved ones are in the VA Boston Healthcare System's West Roxbury campus. Read on page 3 about *Fisher House Boston*, a 20-room facility within walking distance of the medical center slated to open in the fall of this year.

Michael F. Mayo-Smith, M.D., M.P.H. Network Director

## ★ ★ ★ ★ ★ Shinseki is Confirmed as VA Secretary

etired U.S. Army General Eric K. Shinseki was sworn in as the seventh Secretary of Veterans Affairs on January 21, 2009. General Shinseki served as Chief of Staff, U.S. Army, from 1999 until June 2003, and retired from active duty in August 2003.

Following the Sept. 11, 2001 terrorist attacks, he led the Army during Operations Enduring Freedom and Iraqi Freedom and integrated the pursuit of the Global War on Terrorism with Army Transformation.

Prior to becoming the Army's Chief of Staff, General Shinseki served as the Vice Chief of Staff; and served as Commanding General, United States Army, Europe and Seventh Army; Commanding General, NATO Land Forces, Central Europe, and Commander of the NATO-led Stabilization Force, Bosnia-Herzegovina.

He served two combat tours in Vietnam and was severely wounded in action.



General Eric Shinseki

Shinseki holds a Bachelor of Science degree from the U.S. Military Academy at West Point; a Master of Arts degree from Duke University, and is a graduate of the National War College. He has received numerous awards.

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# Fisher House Boston a Resource for Families



eterans with debilitating injuries and illnesses—and their families—face unique challenges when the best care is in a facility far from the patient's home. Thanks to the Fisher House Boston, slated to open in fall of 2009, the journey to recovery will soon be a little easier.

"Hospitals and rehabilitation can be lonely and stressful," says Michael Lawson, director of VA Boston Healthcare System. "In many cases, Veterans returning from service face diminished physical or mental capacity, changes in personality, attention deficits, or memory lapses. Having family members nearby for support—letting a Veteran see a familiar smile and the reassurance of a loved one—is an integral part of patient recovery. It's also imperative for family members to learn to become caretakers. But if the medical facility is miles from home, families worry about where they're going to stay, where they'll eat, and how they'll get around. Our goal is to take away those issues that contribute to patient stress and family stress."

To accomplish that, the Fisher House Foundation is constructing the Fisher House Boston building, and the local VA will provide the staff and expenses to operate it. "We'll be responsible for things like food, linens, and disposables," adds Lawson, "so the families don't have to buy a thing while they're here. It will be a lovely place with 20 full-size suites, and we'll be a mere 'sidewalk trip' away from the front door of the West Roxbury VA facility. You can visit loved ones 24 hours a day, 7 days a week—even take them outdoors and listen to the birds sing in the spring."

"Not long ago," he recalls, "the wife and young son of a spinal cord injured patient were here. They had to stay at a local hotel, and the little guy had no n 1990, Zachary Fisher was looking for projects that would benefit personnel of all military services. Impressed with the idea to provide temporary housing for families of those facing a medical crisis, Fisher identified a site and moved forward. The first Fisher House<sup>TM</sup> opened in 1991 at the National Naval Medical Center, Bethesda, Md.

Today, the Fisher House program is a private-public partnership that recognizes the special sacrifices of men and women in uniform and the hardships of military service by meeting a humanitarian need beyond that normally provided by the Departments of Defense and Veterans Affairs.

Fisher House<sup>™</sup> Foundation donates
"comfort homes," built on the grounds of
major military and VA medical centers. These
homes enable family members to be close to
a loved one during the hospitalization for an
unexpected illness, disease, or injury.

www.fisherhouse.org

place to ride his bike other than the hospital. Fisher House will alleviate those situations and create a more normal environment. VA hospitals provide excellent care," he adds, "but Fisher House will provide the *caring*—the human touch."

Lawson expects the facility to be fully funded before it opens. Fisher Houses operate with the help of donations, as well as with the help of people who are willing to donate their personal services. For more information, log on to <a href="https://www.fisherhouseboston.org">www.fisherhouseboston.org</a> or contact Michelle Keating at (508) 683-3123.

### Exciting Advances in the Field of Prosthetics

# Research from VISN 1 Leads the Way

rosthetics is an ancient science that has slowly advanced. Most early prostheses were made of materials that were on hand, such as wood and iron, and were fashioned to merely fill the space left by the lost limb or, in cases of war, to allow the amputee to continue to fight. For centuries, prosthetic limbs changed very little.

After World War II, in response to the large number of Veterans who lost limbs in combat, the United States government established an agency to advance artificial limb development. Many improvements in both the science of prosthetics and amputee care were made in the succeeding years.

Today, with the number of Veterans seeking prosthetic and rehabilitation services from VA exceeding 1.3 million, and with an increase in the number of Veterans seeking care after returning home from the wars in Iraq and Afghanistan, VA has become a world leader in prosthetics and rehabilitation. Some of the most exciting advances have taken place in the VA New England Healthcare System.

The trend in prosthetics is to integrate body, mind and machine. Leading the way is the Center for Restorative and Regenerative Medicine, established in 2004 as a VA Center of Excellence. The Center, a collaborative effort between the Providence VA Medical Center, Brown University and Massachusetts Institute of Technology, will soon be located in a new facility on the campus of the medical center.

"We're doing some extraordinary things in the areas of tissue engineering, orthopaedics, neurotechnology, prosthetic design, and rehabilitation," says Roy K. Aaron, MD, Center director. One of those things is the BrainGate system, developed by Center researchers John





Above left: wooden prosthesis covered with rawhide. Above right: powered ankle foot.

Donoghue, PhD, and Leigh Hochberg, MD, PhD.

BrainGate uses a tiny sensor implanted in the part of the brain that controls movement. The sensor picks up brain signals that are sent to an external decoder that turns them into commands for operating electronic or robotic devices. It is hoped that this research leads to a more natural signal for limb control.

"The original signals to move the limb, which originate in the brain, are still present even after amputation," explains Dr. Hochberg. "We hope that we can connect these brain signals to the prosthetic limb."

In addition to communicating with artificial limbs, researchers also anticipate using the BrainGate technology to communicate with paralyzed limbs and electronic wheelchairs.

Another recent advancement is in the area of prosthetic design. The first powered anklefoot prosthesis made its debut in 2007 at the Providence VAMC. Developed by a team of researchers led by Hugh Herr, Ph.D., a Center



affiliate, the foot-ankle device is unique because it propels users forward with tendon-like springs and an electric motor. Its benefits are that it reduces fatigue, improves balance, and provides amputees with a more fluid gait.

There's no debate that in the near future state-of-the-art prosthetic sensory aids and limbs will enable Veterans to achieve higher functionality, but advancements in rehabilitation and care will also play a large part in the quality of life of these Veterans.

VA's method of caring for patients who need sensory aids and artificial limbs will continue to evolve. At the Center for Restorative and Regenerative Medicine, research into methods of determining the functional needs of Veteran patients using virtual reality and motion analysis has already led to techniques that are now being used in VAMC clinics.

Until recently, most Veteran amputees have been middle-aged men who have lost limbs to vascular disease. Widespread use of "roadside bombs" in the wars in Iraq and Afghanistan, however, have caused an influx of Veterans needing prosthetic and rehabilitation services. Restoring the capabilities of these Veterans to the greatest extent possible is the mission of VA and the medical centers and facilities of the VA New England Healthcare System.

Prosthetic Award Togus: Participating in the award ceremony were (left to right): Alex Dowgiallo, health systems specialist, VISN 1 Prosthetics; Ryan Lilly, associate director, Togus VA; Steve Imbruno, chief of prosthetics, Togus VA; Frederick Downs, Jr., chief prosthetics and logistics officer, VA Central Office; Dustin Thompson, prosthetics manager, VISN 1; and Penny Nechanicky, service line director, VISN 1 Sensory and Physical Rehabilitation Service Line.

### Togus VA Medical Center Receives Prosthetics Award

t the Togus VAMC, a restructuring of the prosthetics purchasing department resulted in greater cost efficiency and better service to Veterans who need eyeglasses and home oxygen, both considered prosthetic devices. In addition, the respiratory and prosthetics departments together developed new procedures to address the large number of patients needing CPAP (Continuous Positive Airway Pressure) machines. This collaboration has allowed the clinic to increase dramatically the number of patients it sees on a daily basis thus improving the time Veterans must wait to get an appointment.

Because of these positive accomplishments, the Togus VAMC received VA's Deputy Under Secretary for Health 2008 Award for Prosthetics Service of the Year.

# A Breath of Fresh Air

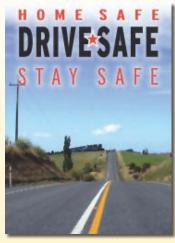
he American Academy of Allergy, Asthma and Immunology reports that 20 percent of all adults are affected by allergy symptoms that are often caused by pollen and mold spores. But before you shed a tear, read these tips so you can avoid allergens.

- check the pollen and mold count before spending time outdoors at <a href="https://www.aaaai.org/nab/index.cfm">www.aaaai.org/nab/index.cfm</a>.
- ♣ Instead of open windows and fans, use air conditioning.
- \* Keep your car windows closed.
- **Stay** indoors on dry, windy days.
- **\display** Find someone to mow your lawn for you.
- Mold can grow in wet soil, so don't grow too many indoor plants if you are allergic.
- Visit your VA health care provider if symptoms persist.

For additional information, please visit www.myhealth.va.gov

### Home safe. Drive safe. Stay safe.

he Department of Veterans Affairs and the Department of Transportation, along with the Department of Defense, are combining forces to reduce the risk of motor vehicle crashes among Veterans, particularly those returning from the current conflicts in Iraq and Afghanistan.



Here are some tips to help get you home safely:

- Don't drink and drive.
- Don't ride with a drunk driver.
- Always wear your seat belt—driving, in the passenger seat, or in a back seat.
- If you ride a motorcycle, always wear a helmet and ride sober.
- Mile for mile, your risk of a fatal crash is about 35 times higher on a motorcycle than in your car. For additional information and resources, visit www.safedriving.va.gov/

# VA *Connects* with Online Communities

he VA is looking to provide innovative ways to reach new Veterans and is using social networking sites and discussion forums to enhance the VA presence online.

The following are the latest ways the VA is communicating with Veterans:

- Blogs are websites featuring first-person diaries. Check out the blog for returning service members at <a href="https://www.oefoif.va.gov">www.oefoif.va.gov</a>
- Second Life is a 3D virtual world inhabited by "avatars" that represent people. Visit the VHA office building at <a href="http://secondlife.com">http://secondlife.com</a>.
- YouTube has several VA videos posted and now has a VA channel. <a href="https://www.youtube.com">www.youtube.com</a>.
- Facebook and MySpace now each have a page for basic information about the agency to lead people to the VA website.

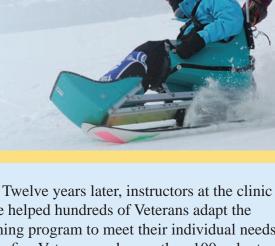
This is only the beginning of VA's adventure into the social media arena, as it continues to evolve with the rapidly changing online world.





# 2009 Winter Sports Clinic Held at Mount Sunapee

ony Santilli, a Marine Corps Vietnam Veteran and amputee, saw his dream of sharing the feeling of freedom and motion turn into a reality with the help of Ralph Marche, chief of voluntary service at VA Boston Healthcare System. Together they established the New England Winter Sports Clinic for Disabled Veterans in January 1998.





have helped hundreds of Veterans adapt the training program to meet their individual needs. Fifty-five Veterans and more than 100 volunteers enjoyed a cold January week filled with fireworks, the "fun race" course, air rifles, karaoke, kayaking, a pizza party, wheelchair basketball, and a mean game of Texas Hold 'Em.

All in all, more than 3,400 hours worth of volunteer love went into this year's event, and the team is already looking forward to next year!

The 12th Annual New England Winter Sports Clinic for Disabled Veterans brings warmth and rehabilitation to fifty-five Veterans at Mount Sunapee, N.H.

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# Veterans' Healthy Living

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